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ABSTRACT

This monograph explores some of the explanations commonly proffered to justify the existing pattern of academic women's employment in Australian universities. The research, data, and explanations in this monograph address the university area of the higher education sector only. It examines the adequacy of some of the explanations given for women's concentration in the lower ranks of academic employment. The validity of various explanations is tested by examining them against available relevant data. This examination strongly suggests that academic women experience sex discrimination, particularly systemic or indirect discrimination, in employment in universities. Among the topics discussed concerning women's participation patterns in academic employment are the following: (1) selection and promotion procedures; (2) turnover in academic employment; (3) academic employment and domestic responsibilities; and (4) gender-based differences in academic merit, such as qualifications, publications, teaching ability, and participation in administration. Appendices provide a comparative listing of the proportion of senior academics who are women in various Australian universities between 1980 and 1987, and a list of the Australian universities whose staff statistics are included in the Universities Annual Statistical Collection, 1987. Contains a 48-item bibliography. (GLR)

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ACADEMIC WOMEN IN AUSTRALIAN UNIVERSITIES

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FELICITY ALLEN

Monograph No. 4: Women Academics in Australian Universities looks at the profile of women in academic employment in Australian Universities.

The monograph investigates the statements which are commonly proffered to explain why women's representation in academic employment is so disparate from that of men's: the numbers of women in academic employment are small and they are clustered in the lower ranks.

While the monograph focuses on academic employment in the university sector the arguments may also be applied generally to the tertiary education sector.

This monograph has been published to promote discussion and debate and to encourage more detailed research into sex differences in academic employment.

Monograph No. 4

Affirmative Action Agency

Women Academics in Australian Universities

Felicity Allen

Australian Government Publishing Service
Canberra

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Monograph No. 4: Women Academics in Australian Universities is the fourth monograph in a series commissioned by the Affirmative Action Agency. The views expressed herein are those of the author.

Other titles in the series:

Monograph No. 3: Gender Bias in Job Evaluation, Clare Burton

Monograph No. 2: Redefining Merit, Clare Burton

Monograph No. 1: Principles of Affirmative Action and Anti-Discrimination Legislation, Chris Ronalds.

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The author is grateful for the assistance of Anna Amies in researching material for this publication.

The Affirmative Action Agency was established in 1986 to administer the *Affirmative Action (Equal Employment Opportunity for Women) Act 1986.*

This Act requires all higher education institutions and private sector employers of 100 or more people to implement an affirmative action program.

Organisations covered by the legislation are required to lodge a report on their program on an annual basis to the Director of Affirmative Action.

The Affirmative Action Agency is within the portfolio of the Federal Minister for Industrial Relations.

The Agency offers advice and assistance to organisations covered by the legislation.

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FOREWORD

This monograph explores some of the explanations commonly proffered to justify the existing pattern of academic women's employment. Strictly speaking the research, data and explanations in this monograph address the university area of the higher education sector only. However, given the similarity of the pattern of academic women's employment in Colleges of Advanced Education, the arguments contained herein are also pertinent to that area.

The monograph attempts to examine the adequacy of some of the explanations given for women's concentration in the lower ranks of academic employment. The validity of various explanations is tested by examining them against available relevant data. This examination suggests strongly that academic women experience sex discrimination, particularly systemic or indirect discrimination, in employment in universities.

This means that affirmative action programs which are designed to identify and combat systemic discrimination should improve the employment opportunities of academic women in the higher education sector.

The monograph is not intended to provide solutions to removing barriers to academic women's employment opportunities. It has been written to promote discussion and debate about how and why academic women's employment experience differs from their male counterparts.

It is hoped that such discussion will lead to more detailed case studies, whether as part of affirmative action programs in higher education institutions or as research work undertaken by women students and academics.

VALERIE PRATT
Director of Affirmative Action

INTRODUCTION

Universities have a great impact on society because of their role in training members of the professions and in defining what is considered "knowledge" by the culture which supports them, although they employ only relatively small numbers of people.

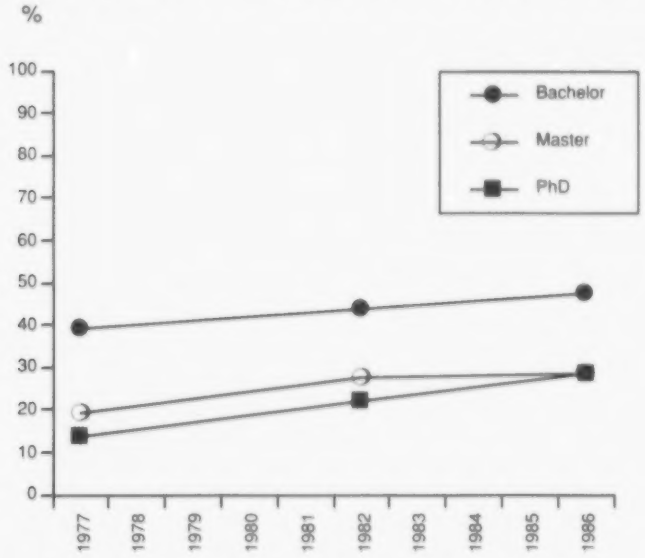
Women's pattern of participation in Australian university life, both as students and academics, is distinctive. Women's participation is concentrated in some disciplines (e.g. the humanities) to the virtual exclusion of others (e.g. applied sciences) and they are more likely than men to be part-time students or non-academic staff members. Women postgraduates did not have equal access to some courses as late as 1974 (Cass, Dawson, Temple *et al.* 1983). While it seems unlikely that such blatant barriers could still exist, systemic barriers may still operate against women's entry to postgraduate study in some areas. Nightingale (1984) reported Macquarie University's decision to remove "relevant employment experience" as a prerequisite for entry to certain postgraduate areas as it was believed that women might have greater difficulty in getting employment in these areas.

Women academics are less likely than men to enjoy tenure with its associated job security, superannuation, study leave and maternity leave. One in 16 university academics is a full-time, tenured woman; one in two university academics is a full-time, tenured man. Women are concentrated in the lowest paid ranks of academic employment. There has been virtually no change in the rank of women academics over the last decade.

WOMEN'S PARTICIPATION IN THE PROFESSIONS AND UNIVERSITY ACADEMIC EMPLOYMENT

Women's education levels have improved over the last 40 years. In 1950, women's share of bachelor degrees was only 18.3 per cent (Jones & Lovejoy 1980) but this increased to 47.6 per cent in 1985. The changes in the proportions of doctorates, master's and bachelor's degrees awarded to women between 1977 and 1985 are shown in figure 1.

Figure 1: University degrees awarded to women



Source: Australian Bureau of Statistics, Catalogue No. 4208.0

Although women's share of doctorates increased from 13.7 per cent to 28.7 per cent in the eight years, the number of doctorates awarded to women in 1985 (210) still compared poorly with the number of doctorates awarded to men (750). At the bachelor-degree level women enrolled mainly in the humanities, behavioural science and education, though their enrolment in

several disciplines (e.g. veterinary science, law, medicine and architecture) increased over this period.

One of the roles of modern universities is to educate and certify, at least to a base-grade level, members of most of the professions. Because of the close links between the professions and the academic world, including the tendency to recruit from each other, it is important to consider the position of women within the professions. Until very recently role models of successful professional women have been rare. The participation of women in selected professions will now be examined.

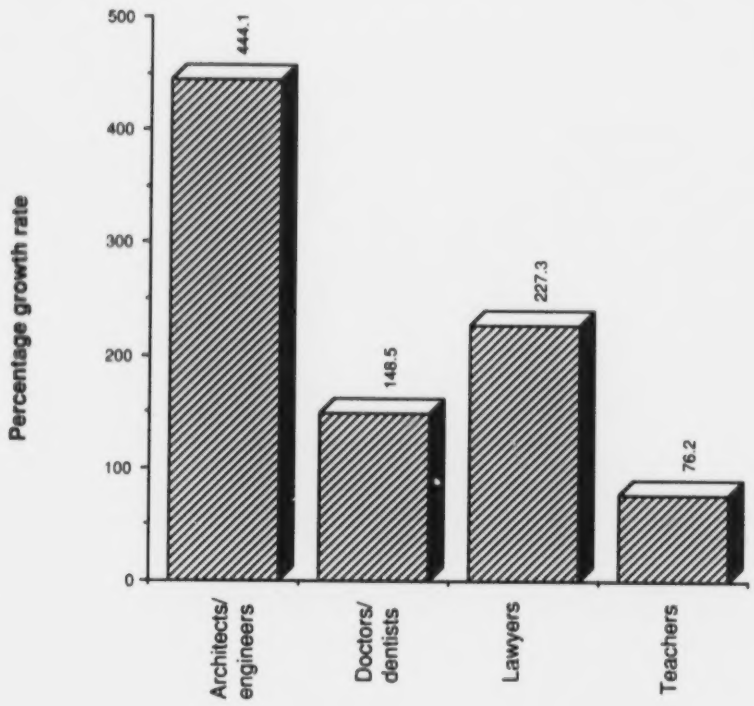
Women in the Australian professions

The professional sector* grew by 56.6 per cent between 1971 and 1981, with the growth rate for women (74.4 per cent) outstripping that for men (43.6 per cent). Three professional groups, architects/engineers, doctors/dentists and lawyers, included very few women in 1971 (1.2 per cent, 11.8 per cent and 5.9 per cent respectively). These percentages compared unfavourably with the overall percentage of women in the professions at that time (42.3 per cent). Growth rates of women's participation in these professions between 1971 and 1981 are illustrated in figure 2.

The high growth rates partly reflect the small number of professionals (both male and female) in 1971. Female architects/ engineers numbered only 203 in 1971, rising to 1105 in 1981. The proportion of women architects/ engineers only increased from 1.2 per cent to 1.8 per cent. By contrast, the proportion of women doctors/dentists increased from about one in ten in 1971 (11.8 per cent) to one in six in 1982 (17.6 per cent) and the proportion of women lawyers rose from one in 20 in 1971 (5.9 per cent) to one in five in 1981 (18.9 per cent). The growth rate in female participation in teaching matched the growth rate in the professions. This figure suggests that professions with low proportions of women in 1971 experienced a "catch-up" phenomenon

* The definition of "professional sector" and of the particular professions within that sector is derived from Commonwealth Bureau of Census and Statistics, *Classification and classified list of occupations*, Commonwealth Printing Office, 1971.

Figure 2: Growth rates for women in four professions: 1971 — 1981



Source: Table 87, Commonwealth Bureau of Census and Statistics, 1971 Census of Population and Housing; and Table 27, ABS Cat. No. 2452.0, 1971 Census of Population and Housing.

relative to the growth in female participation in the professional sector.

Comparable data were unavailable for academics. However, data from the years 1972 and 1982 may be used. In 1972, there were 9734 academics employed on a full-time or permanent part-time basis in universities: only 16.4 per cent were women. By 1982, there were about 11,481 university

academics (ANU Research School data unavailable): only 19.2 per cent were women (Ryan & Evans 1982). Compared with the professional sector, the proportion of women in academic employment in 1972 was low, and the growth rate for women (42.8 per cent) was lower than that for women in the professions: The number of women employed as architects/engineers, doctors/dentists and lawyers more than doubled in the 10 years to 1981.

Women in Australian universities

Data are presented on the 19 universities which submitted statistical reports to the Department of Education, Employment and Training for the Universities Annual Statistical Collection, 1987 (See Appendix 1). No data were available for the Northern Territory University, Bond University, Curtin University or the University of Technology (NSW), because either their foundation or their change in status from a College or Institute to a University was too recent. In 1987, there were 15,215 Australian academics — only 26 per cent were women, most of whom were untenured (see figure 3).

The academic hierarchy is complex. The main ranks comprise sublecturing staff, lecturers, senior lecturers, readers (and associate professors) and professors. Sublecturing staff (i.e. tutors, demonstrators and researchers) are employed to free higher level academics from routine administrative tasks and student contact. As a result, senior staff are able to allot more time to research activities than are tutors. The relevance for appointment to lecturing positions of the teaching experience tutors obtain has been debated. According to one school of thought, lectureships are awarded mainly on publications (Baldwin 1985; Wilson & Byrne 1987). The traditional view that tutors are serving an apprenticeship for academic life can still occasionally be heard, however, its validity seems to be limited. In 1972, a contributor to the FAUSA symposium on conditions of work in the academic area spelled out the new rules:

> If you want to be an academic forget about sublecturer positions and become a research student. Increasingly the path to the top will start here (Parsons 1972, p. 120).

Another contributor (Adams 1972) reported that of the 185 lectureships filled in Australia in 1971, only about a dozen were identifiable as promotions from the sublecturer range. These customs seem by now to have been almost universally accepted. In 1982, Professor Karmel testified to the Senate Standing Committee on Education and the Arts:

> By and large the people who were tutors and demonstrators were not regarded as having an academic career (1982, p. 60).

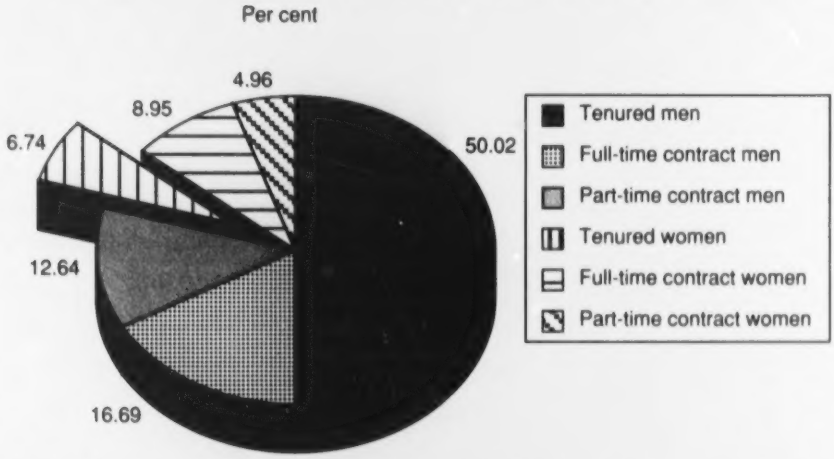
Tutors cannot be promoted to lecturer level on the basis of individual academic merit in the way that lecturers can be promoted to senior lecturer. In order to attain a lectureship, they have to apply for a job which has been advertised.

The number of tutors fell by 20 per cent between 1975 and 1982 (FAUSA 1983) while the proportion of women tutors increased from 35 per cent to 42 per cent. Men deserted the tutorial ranks. The other category of sublecturing staff is junior research staff. Three reports on this group (Bramley & Ward 1972; Sawer 1984; Wilson & Byrne 1987) found poor conditions of work and limited promotion prospects for them.

Almost half of all lecturers (48 per cent) were tenured in 1987 and enjoyed many conditions of academic employment in common with senior academics including access to promotion. However the proportion of tenured lecturers has fallen over the last 16 years. Limited-term lectureships were introduced in 1972 (MacCallum 1983), ostensibly to give universities flexibility (Maslen 1983), but also to reduce costs in several ways: no superannuation or long-service leave; and minimisation of wage costs by constant replacement with new staff at the bottom of salary ranges. While there are already small numbers of limited-term appointments among senior academics, there are plans to increase this type of appointment. The distribution of male and female academics by tenure and time fraction is shown in figure 3.

Of all university academics in 1987, 50.02 per cent were full-time, tenured men; only 6.74 per cent were full-time tenured women. Almost one in two female academics (43 per cent) was untenured and full-time; one in every five males (21 per cent) was. Women were more likely to be part-time (28 per cent of part-timers) than full-time workers (19 per cent of full-timers).

Figure 3: Male and female university academics by tenure — 1987



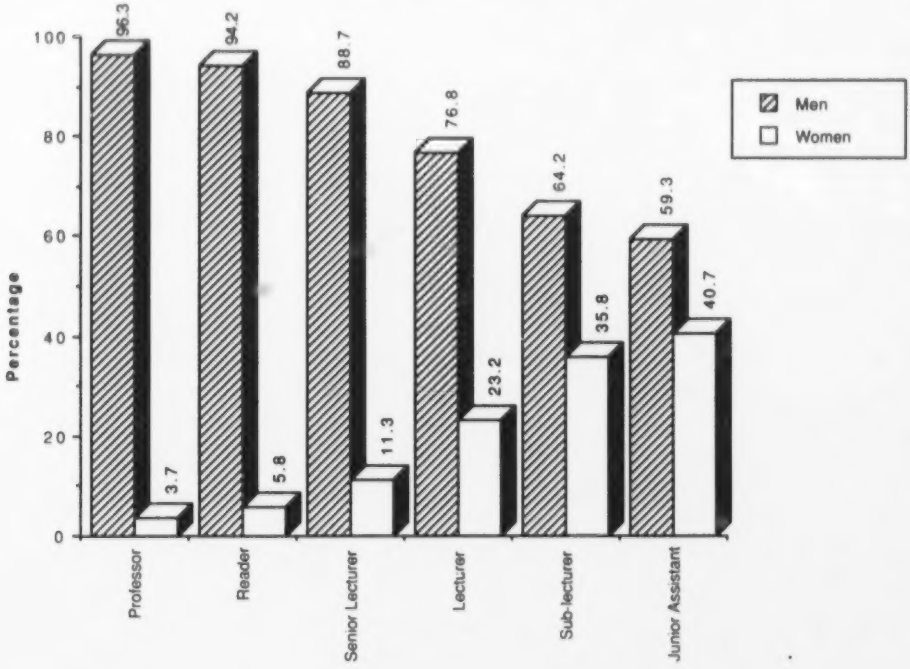
SOURCE: Department of Education, Employment and Training, Universities Annual Statistical Collection, 1987 (Forms 213 & 214).

Tenured senior academics have job security, superannuation, and a range of leave provisions such as study, long-service and parental (leave provisions vary between States and individual institutions), access to research grants and greater opportunities for promotion. They participate in university decision-making which confers considerable control over conditions of work. Senior academics may head research bodies or chair commissions. They attend overseas conferences, utilising travel funds from the university. Their teaching responsibilities may be subordinated to these more prestigious activities.

The position of untenured academics is more complex. Untenured academics are employed on contracts which can vary in several ways. The contracts can be fixed or indeterminate. They may be renewed annually or at periods of several years (usually five). Until 1988, some universities had a rule that an untenured academic might only have a certain number of

contract renewals. He or she then had to seek employment elsewhere. In that year, FAUSA obtained an award disqualifying universities from limiting contract staff's right to apply or reapply for positions. The sex difference in access to tenure may be partly explained by the sex difference in academic rank (C. Bowtell). Untenured staff's entitlements to leave, superannuation and other conditions of work varies by university and valid generalisations are difficult. As a rule, however, they are not entitled as of right to the same conditions as those enjoyed by tenured academics. They may, for example, be permitted to join the superannuation scheme but not required to do so.

Figure 4: Australian academics by level and sex



SOURCE: Department of Education, Employment and Training, Universities Annual Statistical Collection, 1987 (Forms 213 & 214).

Of 1181 professors in 1987, only 3.7 per cent were women. Of 3141 female academics, 1059 (33.7 per cent) were tutors and another 632 (20.1 per cent) were junior research assistants. More than half of the women (53.7 per cent) were in the sublecturing ranks. The most common academic rank held by men was senior lecturer (30.3 per cent of men) and nearly a quarter of the males (23.3 per cent) were either professors or readers. Therefore, while more than half of the male academics were above the rank of lecturer, less than half of the women were.

There was a strong association between academic rank and the likelihood of attaining tenure. Tenure was least likely in the sublecturing ranks where women are concentrated. Of the total 3620 university lecturers in the 1987 sample only 389 (10.7 per cent) were tenured women. Their poor representation in tenured lectureships is disturbing because "lecturer" is now seen as the bottom rung of the academic ladder for promotion to higher levels. This has implications for the future recruitment pool for institutions and means that active measures will be needed to change the employment patterns of women academics.

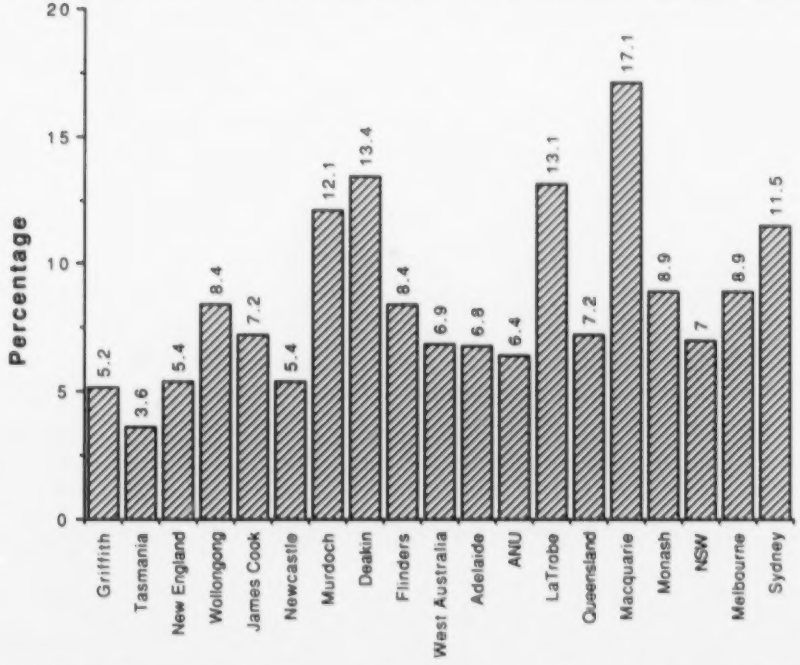
DIFFERENCES IN OPPORTUNITIES

Geographical variations

Sex differences in achievement are often explained as the product of biological differences or of different socialisation. However, the existence of geographic and historical variations in the achievements of women relative to men invalidates the biological argument. In Australia, a relatively homogenous society, the demonstration of geographic variations makes it difficult to sustain explanations which are based on theories of sex-role socialisation for women's limited chances of success in academic employment.

Australia has universities in all States and Territories. These range from large, old universities like Queensland (n=2632 academics) down to small, new universities like Deakin in Victoria (n=284 academics). The distribution

Figure 5: Percentage of senior women academics by university



SOURCE: Department of Education, Employment and Training, Universities Annual Statistical Collection, 1987 (Forms 213 & 214).

of academics is uneven, as evidenced by the Universities Annual Statistical Collection, 1987. The University of Queensland contained 17.3 per cent of the university academic workforce, while Australia's smallest university, Murdoch, contained only 1.6 per cent of the academic workforce. While it might be expected that senior women academics would be evenly distributed across universities this was not the case.

All Australian universities had some women at the rank of senior lecturer or above; four of them (Griffith, Flinders, Murdoch and Tasmania) had no women professors. Tasmania was the only Australian university with no women at all above the rank of senior lecturer. While all the others had

women readers, five (Newcastle, Deakin, James Cook, Griffith and Murdoch) had only one woman each at this level.

The distribution of female academics throughout Australia's 19 universities in 1987 is shown in figure 5. A "senior" academic is defined as a senior lecturer or above, while a "junior" academic is a lecturer or below. On average Australian universities have 341 male senior academics (ranging from 73 at Griffith to 759 at UNSW) but only 32 female senior academics (ranging from 4 at Griffith to 98 at Sydney).

Macquarie University had the highest proportion of senior women academics (17.1 per cent) and University of Tasmania the lowest (3.6 per cent); Macquarie had 4.8 times as many female senior academics as Tasmania. Each university was ranked according to the percentages of female academics at senior and at junior levels, and a Spearman's rank test of correlation performed. (The result: Spearman's rho=0.7407, df=18, .01>p; rho is the value of the correlation, df stands for degrees of freedom and p is for probability. The correlation shown here is so high that it cannot be explained by chance or coincidence.)

The significant result showed that universities with high proportions of senior women had high proportions of junior women. The converse was also true. This suggests that some universities are generally more welcoming to women staff members. This means that there may be factors which can be used constructively to attract women academics.

Faculty mix may explain the differing proportions of women. Universities with no teaching in disciplines such as engineering might have relatively high proportions of women academics. Gale (1980) discussed this issue but found no relationship between faculty mix and proportion of female academics, but no attempt has been made to replicate or update her work.

Other than the possibility of faculty mix, there were no obvious explanations for the geographic variations in the proportion of women academics. Some large, urban universities (e.g. University of NSW) had relatively low proportions, while Deakin, a small country university, had high proportions. Tasmania (1890) is one of Australia's four nineteenth century universities,

but lingering tradition cannot explain its poor showing, because Sydney (1851) had an above average proportion of senior women academics. Macquarie (1967) had a high proportion of senior women academics, contrasting with its contemporary Griffith (1971) which had only 5.2 per cent of senior women academics, and no women professors.

Historical comparison

The small numbers of senior women academics suggested that the rank ordering of universities over time might be unstable. Gale (1980) was the first to comment on the geographic variation in the proportions of Australian women academics. When the present data were recoded to match hers and a correlation calculated between the Gale's ranks and the 1987 ranks, a highly significant association was found (Spearman's rho=0.7589, df=15, .01>p). The rank order was stable despite the fact that every university (except Griffith), showed a slight increase in the proportion of women at the rank of lecturer and above. Whatever factors determine the proportion of women academics, they appear to be consistent, at least over eight years. The proportions of women in universities in 1980 and 1987 are shown in Appendix II.

The reasons for the distribution of women through the academic hierarchy and its stability over time will now be examined.

EXPLANATIONS FOR WOMEN'S PARTICIPATION PATTERN IN ACADEMIC EMPLOYMENT

Investigations into women's employment conditions have been conducted at many Australian universities (eg, see Baldwin 1985; Bramley & Ward 1972; Cass *et al* 1983; Davis 1982). Several explanations have been advanced for the concentration of women in the lowest academic ranks and the slow growth rate of women's participation in the academic area. These explanations generally involve the following:

1. Selection and promotion procedures in academic employment;
2. Low levels of turnover in academic employment;
3. Women's reluctance to apply for positions;
4. Incompatibility of academic employment and domestic responsibilities;
5. Sex-based differences in academic merit.

1. Selection and promotion procedures

As a rule, the process of academic appointments becomes more formal and public as the level of appointment rises. If an academic post is created it can be advertised internally and/or externally and filled. An academic may also apply successfully for promotion from lecturer to senior lecturer. Opportunities for promotion vary according to the academic rank occupied. There is no provision for individual promotion on merit from tutor to lecturer. Lecturers may be promoted to senior lecturer on the basis of their individual academic merit. As a rule, applicants for an advertised position submit written applications and their *curriculum vitae*. Positions are not always filled by advertisement; Harper (1987) found that 54 per cent of her respondents had learned about their first positions at Melbourne by word of mouth or invitation. Poiner and Burke documented the University of Sydney's progression towards more rigorous advertising requirements. Nevertheless, they commented:

> The most arresting feature of the information on recruitment patterns

> for these two years [1981 and 1982] is that there was no record kept on whether the job was advertised at all, internally or externally, for the majority (over 62 per cent) of the position inspected (1988, p. 123).

Practically all junior academic positions at the University of Sydney were filled independently of any advertisement during this period. As Poiner and Burke commented, the suspicion that recruitment was not entirely open arises under these circumstances.

Where positions are advertised, the details of the requirements for the job may be very sparse. Inadequate job descriptions allow shifts in emphasis on various criteria in the course of the recruitment process (Poiner & Burke 1988).

A shortlist is drawn up, usually by the Head of School. The meaning of the term "shortlist" may vary, from applicants for whom referees' reports are called for to the listing of those called for interview. A requirement to state the criteria for shortlisting is found in some universities but it is by no means automatic. Some universities require that a shortlist which has no women applicants be justified (e.g. Adelaide), but most do not. Interviews are not inevitable; Harper (1987) reported that only 58 per cent of academic women and 50 per cent of men had been interviewed for the position they held at the time of survey. Appointment following interview by committee is general for senior appointments. However, practice with junior academic appointments varies. Interviews were not traditionally common practice for junior academic appointments at the University of Sydney, though this has recently been altered (Poiner & Burke 1988). All-male selection committees are not unusual. Criteria for selection may or may not be spelled out. The committee may be required to justify its decision to the central administration, but usually it is not.

2. Turnover in academic employment

Nine universities were founded between 1960 and 1980. After Deakin was founded (1977), there was a hiatus of nine years when no universities were founded and many had upper limits on their student intake — the "steady-state" universities. The academic sector's major expansionary phase in the

late 1960s and early 1970s, was at a time when the sex difference in qualifications was greater than it is today.

One explanation of the stasis in women's academic advancement is the presence of a large cohort of tenured men recruited during the period of expansion. Over (1981) asserted that little improvement in women's position in the academic world can be expected in the next twenty years because there are so few openings. The low turnover in academic employment has now become accepted (e.g. Baldwin 1985; Wilson & Byrne 1987), despite the fact that Over (1981) gave no data on this phenomenon. Over's predictions are counter-intuitive. Many academics are qualified to practise a profession other than teaching (e.g., law, medicine, accounting) and many senior academics are near retirement; factors producing high turnover.

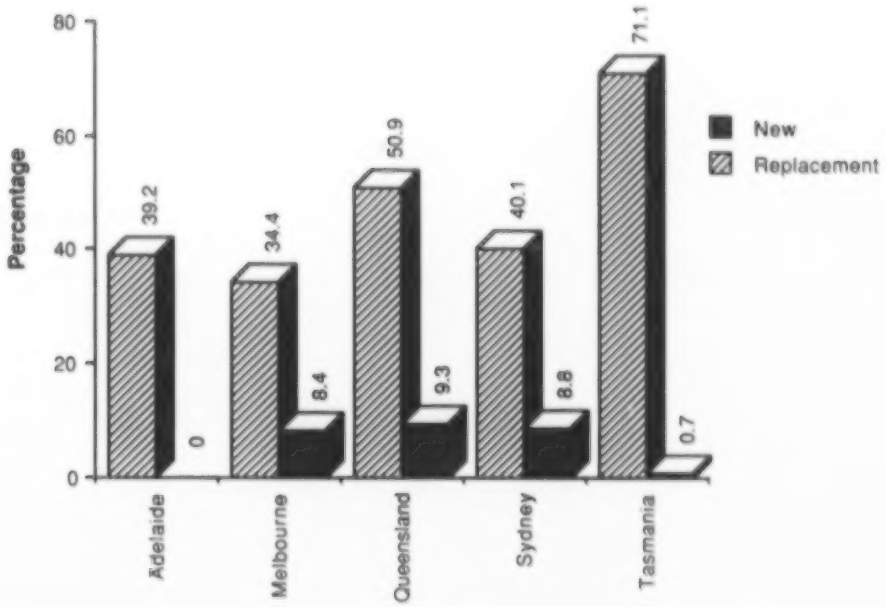
Over and Lancaster (1984) followed up two cohorts of lecturers (1962-64 and 1975-76) for six years from appointment. If promotions and leaving academic employment are combined, the total turnover rate for lecturers can be calculated. In the 1960s cohort, there was an annual turnover rate of 7.3 per cent. In the 1970s cohort, the annual turnover rate had fallen to 5.3 per cent. Even if the lower figure were typical, over half of all lecturing positions are vacated every ten years.

University Calendars list the year of appointment of professors. The Calendars for the Universities of Sydney, Melbourne, Adelaide, Tasmania and Queensland were compared for the years 1977 and 1987. These universities were the first university founded in each State. Most were subject to "steady-state" restrictions on growth in student enrolments during the 1970s. Figure 6 shows the proportion of professors in 1987 who had been present in 1977 and the proportion that consists of new professors.

Professorial turnover may lead to considerable consequential turnover. Four universities showed continuing expansion at the professorial level, despite the "steady-state" conditions. All showed considerable turnover at the top level. The findings of this survey and Over and Lancaster's (1984) data contradict Over's (1981) vision of a stable academic profession.

Any simple explanation of the low numbers of women academics in terms

Figure 6: Professorial turnover in five universities



SOURCE: University Calendars for 1980 and 1987

of turnover rates is ruled out by Poiner and Burke's study of the University of Sydney. While women increased their share of academic positions during periods of great expansion:

> At the senior lecturer level the increase in the numbers of men far outstrips the numbers of women over the period [1952-1980], ie, women increase by 17, men by 50." (1988, p. 21).

Lack of turnover cannot explain why men benefit more than women in periods of high turnover.

3. Reluctance to apply for appointment or promotion

Women applicants for appointments to academic positions are proportionately more likely (Wilson & Byrne 1987; Harper 1987) to succeed than men. There is some evidence that women applicants for promotion may also be more likely to succeed than men (Kippax 1986). Kippax studied 25 applications for promotion from lecturer to senior lecturer at Macquarie University and found that women were more likely to be promoted than men. She commented that the differential success rate by School might have contributed to the differential success rates of men and women. However, these comments are based on a very small study.

If women applicants for appointments or promotion may be more likely to succeed than men, why are women so poorly represented in the academic area? One possible explanation is reluctance to apply. There is some evidence that women make fewer applications than men. Harper (1984) found that women made only half as many unsuccessful applications, on average, as men. Poiner and Burke reported that at least one woman did not apply for a Chair because "It never occurred to me that they would appoint a woman" (1988, p. 39). Whether women are in fact proportionately less likely to apply for appointment or promotion than men has not been firmly established. Little is known about academics' reasons for application, nevertheless it has been suggested that women are less ambitious than men and hence less likely to apply for positions.

If lack of ambition is the sole reason for non application, then Australian academics are an unaspiring lot. FAUSA (1977) found that a majority of both sexes (59.7 per cent of men and 55 per cent of women) said that they had "never applied" for promotion. When the respondents were asked to estimate their chances of success, the men were more optimistic; 56.8 per cent were "very confident" compared with 44 per cent of women. Over and Lancaster (1984) showed that the women's pessimism was well founded. The men in the 1960s cohort were 2.5 times more likely than the women to be promoted within six years from appointment; 1970s men were 1.6 times more likely to be promoted.

Women's low levels of application for senior positions may stem from interpersonal politics. Women are less likely than men to acquire mentors (Davies 1982; Sawer 1984) and have less access to informal networks. The importance of a personal invitation in university applications has already been noted. Images of suitable positions for each sex may influence the kinds of positions that they are invited to fill. Allen (in press) found that not one of the 51 senior academic women at Melbourne University in 1984 had begun their career above the lecturer level; 67 per cent of them began as sublecturers. By contrast, 33 per cent of a random sample of senior academic males and 20 per cent of a matched sample of senior academic males had begun their careers at Melbourne with a rank in that category (i.e. as senior lecturer or above). As there were no differences in average age, this finding cannot be explained in terms of women taking time off to have children. Women took significantly longer than men to attain senior academic rank, despite the fact that no significant differences in initial or final qualifications or opportunities for promotion were detected between the three groups of subjects. There was, however, evidence from the interviews that women were grateful to be offered a university position and they reported either lack of support or discouragement from their superiors when they discussed promotion (Allen 1986).

4. Academic employment and domestic responsibilities

One explanation for women's poor showing in the academic field is the incompatibility between their domestic and work roles.

The scarcity of senior academic women has been attributed to career interruptions while their children are small (George 1982; Kramer 1983; Baldwin 1985; Hunter 1974; Anonymous 1985). While the hypothesis is compelling that the demands of teaching and motherhood leave little time for research, the only test of this found no evidence whatsoever among American women scientists (Cole & Zuckerman 1987). Neither Sawer (1984) nor Harper (1987) found large numbers of women academics taking maternity leave, but, the reasons for this are unclear. It may be possible for academics to time the arrival of their children to coincide with the main vacation time.

Sawer, however, reported instances of women feeling obliged to choose between career and family and either have fewer children than they wanted, or none.

The term "domestic responsibilities" includes a great deal more than childcare. Women undertake the major burden of caring for all family dependants, young and old.

In addition to these demands on time and energy, some aspects of women's domestic roles directly affect their employment opportunities. Wives accompany husbands who transfer to another city; husbands do not usually reciprocate. Some universities forbid the employment of members of the same family.

Involuntary mobility due to transfer of a spouse is more likely for women than men because of the custom that the husband's domicile determines that of the couple. For the woman this may mean forsaking a good position. Women may be less able to move to take advantage of an opportunity. FAUSA (1977) reported that more than half (52.3 per cent) of the female respondents' careers had been adversely affected by mobility factors, compared with a quarter (24.8 per cent) of males. However, Over and Lancaster (1984) found that proportionately as many of their women subjects as men had moved from one Australian university to another.

5. Gender-based differences in academic merit

One explanation for the different distribution of the sexes throughout the academic hierarchy is that men and women show true sex differences in academic merit, with men having more, and women less of this quality. The argument that success is due to merit is a familiar one in discussions of the role of the education system in conserving and reproducing cultural inequities (Bourdieu & Passeron 1977). The ideology of democracy requires that privilege be legitimated. In the lower levels of the education system, the schools provide an apparently impartial system of certification (MacDonald 1980). At the highest levels, employment in universities, academic merit is inferred from the observation of success. This is, however, a circular argument unless merit can be objectively defined.

One definition of academic merit was given by a vice-chancellor, to explain why Melbourne University had taken 122 years to appoint its first woman professor:

> In making appointments to academic posts ... it has considered ... only the qualifications and capacities of the persons concerned. (Derham 1975, p. 12)

"Qualifications" usually means formal, academic qualifications but "capacities" presumably means a mixture of research, administrative and teaching ability, since all of these are mentioned in guidelines for selection and promotion.

In the absence of an objective definition of academic merit there are other ways of ascertaining the validity of statements such as: senior academics have more merit than junior ones; and men are more meritorious than women.

It is possible to test the validity of such statements by examining commonly proffered explanations for them against available relevant data. These explanations are generally based on assumptions about:

- qualifications;
- type and/or rate of publications;
- teaching ability; and
- administrative work.

These four issues are analysed below to determine if there are sex-based differences which can explain women's poor participation and rank in academic employment.

Qualifications

Hypothesis —If qualifications were a major determinant of academic rank, senior academics without doctorates would be almost unknown; even lecturers would have doctorates on appointment and academic women's qualifications would be lower than those of men.

Allen (1986) found no significant sex differences in qualifications among senior academics at the University of Melbourne in 1984. It might be argued

that this merely reflected earlier appointment practices, however, studies of recent appointments have found that appointment without a doctorate is still relatively common. Although Over (1981, p. 170) maintained that "... a postgraduate degree is typically a necessary qualification for a university appointment ...", Baldwin (1985) found that only 51 per cent of lectureships at Monash between 1980-1984 went to candidates with PhDs; the relative scarcity of doctorates among women cannot account for the sex differences in academic recruitment. Conversely, Amies (1982) reported that many of Monash's senior tutors held higher degrees. Inspection of the University of Melbourne Calendar for 1987 reveals that professors were appointed without doctorates in the 1980s. The question is then: If men can profess a subject without a doctorate, why not women ?

Publications

Hypothesis — If publications are a major determinant of academic rank, senior academics should have published more than juniors. Women should have lower rates of publication than men.

Given the emphasis on publication in academic circles as a determinant of selection and promotion (e.g. Baldwin, 1985; Wilson & Byrne, 1987) it is surprising that normative data are not available for each discipline. In the absence of these data, it is impossible for a selection or promotion committee to have any idea whether a candidate's number of publications is reasonable in view of his or her age and field of study, yet judgements about whether candidates have published "enough" are commonly made.

Data on publication rates are limited to surveys, relying on subjects' self reports. Their findings are conflicting, which may be a function of different perceptions about what constitutes an academic publication. Different subject areas may have different expectations of the type of publication e.g. books are relatively common among historians. FAUSA (1977) found that their members reported much the same rate of publication irrespective of sex. This contrasted with findings for America (e.g. Cole 1979; Helmreich, Spence, Bean *et al.* 1980), England (Blackstone & Fulton 1976), for Australian academic psychologists, (Over 1982) and at the University of New

England (Davies 1982); that men reported higher rates of publication than women. The findings of higher self-reported rates of publication among men were found across a wide range of disciplines.

From the data available it is not possible to determine the relationship between publication rate and academic rank. Davies (1982) found that women were not promoted in the same proportions as men with comparable publication rates. Wilson and Byrne (1987) found a sex difference in the relationship between rank and publication: senior men published more than juniors. By contrast, many of the most productive women were in the junior ranks.

Cass, Dawkins, Temple *et al.* (1983) at Sydney, found that men published more than women in all faculties except medicine and veterinary science and that publication rates increased with academic rank for both sexes. These findings are consistent with at least two possible interpretations, that:

- higher publication rates are rewarded by promotion; or
- promotion makes it possible to sustain higher publication rates.

Cass, Dawkins, Temple *et al.* inclined to the latter hypothesis and commented:

> The interconnections of senior rank and masculine gender are most conducive to the maximisation of time spent on research administration (1983, p. 75)

A prospective study of the relationship between publication rates and promotion is needed to resolve this.

Rate of publication is only one aspect of productivity; consideration should also be given to quality. Assessing the quality of original work is not easy but it could be attempted. The selection committees might assess the articles themselves, they might check the applicant's curriculum vitae against the Citation Indices where possible, or they might arrange for independent professional evaluations of the articles.

Blunt (1976) could not be definite about whether selection or promotions committees read publications. (No studies of the shortlisting process have been published, so the criteria are unknown.) Thornton (1984) and Reilly

(1984) criticised the practice of appointing committees with a preponderance of external members as it encouraged a "count the publications" approach. Wills (1985) reported that promotion criteria at Macquarie University require that referees be sent four or five nominated publications by the candidate to be read. Consulting Citation Indices is rare (Sawer 1984). There are considerable problems with using Citation Indices as a guide to quality; a controversial but poorly written article may attract many critical citations. A well written article in a field with few scholars may rarely be cited.

Without normative data on publication rates, or any system to assess quality, it can only be concluded that the relationship between publication and academic merit is notional at best, and may show sex differences.

Teaching ability

Hypothesis — If teaching ability were an important determinant of academic rank, academics would be required to demonstrate ability on appointment, followed by regular evaluations of teaching practice.

The assessment of teaching effectiveness offers many of the problems encountered in the evaluation of the quality of research. The definition of good teaching is difficult in itself. Evaluation of broader aspects of academic teaching such as course development, is rarely attempted. There are no requirements that academics hold teaching qualifications, and they are rarely required to demonstrate teaching ability. At the University of Queensland "... promotion is evaluated in terms ... teaching experience ..." (Wilson & Byrne 1987, p. 102), but research publications are considered to be the critical filter in promotion. Baldwin found that Monash had

> ... done its best to acknowledge the importance of teaching in the official regulations: the criteria for promotion to Senior Lecturer, for instance, include teaching. However without any system for assessing the teaching of individuals, such statements remain empty pieties (1985, p. 163).

The same approach prevails in many other Australian universities though there are some exceptions. Macquarie University's guidelines for

promotion to the grade of senior lecturer state: "Applicants should ensure that their teaching has been evaluated" (1986, p. 3).

Participation in administration

Hypothesis — If participation in administration is an important determinant of academic rank then men must play a greater role in administration than women and administration must be rewarded by promotion.

The powerful university committees are male dominated (Sawer 1982; Wilson & Byrne 1987). The Women's Working Group found that Melbourne University had a mean of 16.4 men on Council committees but only 1.5 women (WWG 1981). It is an attractive hypothesis that membership of important committees enables participants to make powerful friends and acquire inside information. The view that women's lesser participation in administration reduces their opportunities for promotion should not, however, be accepted too readily.

Membership of powerful committees is overlapping; a small number of men sit on almost all of them (e.g. WWG 1981; Wilson & Byrne 1987). Membership of many committees is a **consequence** of rank, rather than a **cause** for promotion. That committees are male dominated does not mean that the typical male academic devotes more time to administration than the typical female. A male academic's opportunities to join important committees may be very limited.

Convincing evidence that participation in administrative activities and membership of committees leads to promotion has not yet been obtained.

THE EXPLANATIONS CONSIDERED

Explanations for the poor representation of women in academic employment, particularly in senior positions, which include reference to sex-based differences in academic merit are not strongly supported.

Sex-based differences in patterns of qualifications and publications are not consistent with the view that women are less likely to attain high academic rank than men because they have lower qualifications or publish less.

Since no significant studies have considered questions about teaching ability and experience it is not possible to assess the value and influence which teaching ability/experience may have in selection procedures in academic employment.

The main university committees are usually male dominated, but there was no clear evidence that males generally did more administration than females. Committee membership may be a consequence of rank rather than a cause of promotion.

The marked geographic variation in the proportion of female senior academics undermines explanations based on sex differences in merit, aspiration or domestic responsibilities. In a small relatively homogeneous society like Australia, what differences in socialisation could account for the fact that the proportion of senior academic women at Macquarie University is three times greater than the proportion at the University of Tasmania? The observed geographic variation strongly suggests that some factor or factors within the universities concerned contributes strongly to women's opportunities to reach the senior academic ranks. This may be faculty mix or a climate of opinion in which women are more easily accepted in some universities than in others.

The examination of systemic barriers to women's advancement produces mixed results. There is considerable turnover in academic employment which means opportunities for promotion are available. Direct evidence of gender-based differences in applications for academic posts is rare. The processes of selection and promotion within universities are not as system-

atic as those within the Australian Public Service or comparable large employers, although this is changing with the development and implementation of affirmative action and equal employment opportunity programs.

There is some evidence that women are disadvantaged in access to informal networks which can provide a valuable source of information about academic employment and even job offers.

Competing demands from domestic responsibilities, particularly caring for children, may delay or reduce women's ability to acquire doctorates, to publish and ultimately to attain high academic rank. Again, there is little evidence for this. Women may leave academic employment because of these pressures, but those who remain rarely take maternity leave, yet they are still concentrated within the lowest ranks.

If combining a career with domestic responsibilities is burdensome for women, there are three institutional responses which could help: maternity leave, adequate child care facilities and flexible working hours. Maternity leave was first instituted in an Australian university in 1973 by Flinders University for tenured staff. Women academics having children before that time did what untenured academics are often still required to do; took sick leave, resigned or were fired. The practice of firing pregnant academics was first resisted in 1972 (FAUSA 1973). The Senate Standing Committee (1982) recommended the provision of creche facilities at each institution. The facilities have been criticised at several universities, (Reilly 1984; Sawer 1982). George (1982) reported that Sydney was only beginning to act on plans to improve child care facilities which had been drawn up ten years before.

Flexible time positions with *pro rata* access to the conditions of full-time employment have been available at the University of Melbourne for many years (WWG 1981). They are almost invariably held by men in faculties related to clinical studies (e.g. Medicine). Bramley and Ward (1976) recommended these in the ANU, but to date less than 1 per cent of the ANU academic staff are on tenured fractional appointments (Sawer 1984).

This review of women's conditions of work and access to senior positions within academic employment in the university sector of Australia shows that

women are less likely to reach senior academic ranks than men. This situation has been either ignored or explained away as due to causes beyond the universities' control. What is lacking is some concerted attempt to determine the conditions preventing women's success and then to change them. The situation to date has meant that women's talents and intelligence are grossly under-used.

The *Affirmative Action (Equal Employment Opportunity for Women) Act 1986* which covers higher education institutions was introduced to compel organisations to identify and eliminate discrimination. Now, as Australian Universities, Colleges of Advanced Education and other tertiary institutions — where women have both similar and distinct problems in academic employment — are going through the processes of restructuring, including amalgamations, it is vital that all participants attempt to understand how discrimination has inhibited women's participation in academic employment. It is critical that this period of great change be used to enhance women's opportunities and to ensure equal employment opportunity becomes a reality.

APPENDIX I

Staff statistics for 19 universities are included in the *Universities Annual Statistical Collection 1987*, Department of Employment, Education and Training (Cwlth). The universities included are:

1. Deakin University
2. Griffith University
3. James Cook University of North Queensland
4. LaTrobe University
5. Monash University
6. Murdoch University
7. The Australian National University
8. The Flinders University
9. The Macquarie University
10. The University of Adelaide
11. The University of Newcastle
12. The University of New South Wales
13. The University of Queensland
14. The University of Western Australia
15. The University of Wollongong
16. University of Melbourne
17. University of New England
18. University of Sydney
19. University of Tasmania

APPENDIX II

Proportion of senior academics who are women: a comparison between universities operating in 1980 and 1987.

UNIVERSITY	1987	1980
Macquarie	21.1	13.3
La Trobe	17.3	13.4
Sydney	16.9	10.5
Murdoch	16.9	9.5
Griffith	15.9	15.8
Melbourne	15.6	12.7
James Cook	14.8	6.3
Monash	13.7	7.4
NSW	11.1	5.6
Flinders	12.2	7.4
National	11.7	8.4
Tasmania	11.6	5.0
Newcastle	11.3	6.7
Adelaide	10.6	6.2
New England	10.3	7.5

SOURCE: Gale, 1985; Universities Annual Statistical Collection (Forms 213 & 214), Department of Employment, Education and Training, 1987. Data refers to 15 universities which were operating both in 1980 — the time of Gales's research — and in 1987.

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